1   Abstract

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3   A method of generating IP identification numbers for IP datagrams. A plurality of

4   IP identification number generators are maintained. A plurality of receiving stations are

5   associated with the plurality of IP identification number generators such that each receiving

6   station has an IP identification number generator associated therewith. An IP identification

7   number is generated for a datagram sent to a receiving station based on an output of the

8   associated IP identification number generator. Also, a method of reducing a likelihood of

9   misassembly of received data fragments from fragmented IP datagrams. The data fragments have

10   an IP identification number. All received data fragments of the datagram are discarded upon

11   detection of receipt of an overlapping data fragment having the IP identification number.

12   Timeouts for reassembling datagrams are reduced. First, timeouts for reassembling the

13   datagrams are reduced to less than a standard timeout. Second, timeouts are reduced upon

14   detection of a gap in the received data fragments. Third, timeouts are reduced upon detection of

15   a datagram having the same protocol identification number and source address, but having a

16   different IP identification number. Furthermore, a method of detecting a likelihood of

17   misassembly of data fragments from fragmented IP datagrams. Communication errors between a

18   sending station and a receiving station are detected. A rate is determined at which an IP

19   identification number generator associated with the receiving station wraps around. NFS re-

20   transmissions are determined. Based on one or more of these, a likelihood of misassembly at the

21   receiving station is determined to be high.